
# 2000 Annual Report

May 2003

Prepared By

Missouri Department of Natural Resources
Air and Land Protection Division
Air Pollution Control Program

# Volume I

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# I. Executive Summary

The Gateway Clean Air Program is a new vehicle emissions inspection and maintenance program that affects vehicles registered in St. Louis city and St. Louis, St. Charles, Jefferson and Franklin Counties. The Missouri Department of Natural Resources oversees the program, which is operated by a contractor, Environmental Systems Products (ESP) Missouri. The purpose of this program is to reduce the amount of hydrocarbon emissions from light-duty passenger vehicles and trucks so that the St. Louis ozone nonattainment area meets the National Ambient Air Quality Standard for ground-level ozone, or smog.

This annual report covers the first year of operation of the Gateway Clean Air Program. The report makes the following findings:

- The Gateway Clean Air Program has reduced tailpipe and evaporative hydrocarbon air pollution in the St. Louis area.

- The Gateway Clean Air Program experienced some challenges during the first few months of operation, including long motorist wait times, the introduction of a new testing technology called RapidScreen and concerns about vehicles damaged during the emissions testing process. The Department of Natural Resources and ESP Missouri have responded to each of these challenges and has improved the program in each of these areas.

- The Gateway Clean Air Program incorporated RapidScreen, an innovative motorist convenience element, into the design of the program. With the use of remote sensing technology, RapidScreen identifies the vehicles in the St. Louis area with the cleanest emissions. These vehicles are then exempted from an emissions test at a station. Through this process, 23 percent of the vehicles in the St. Louis area skipped a trip to a test station. In addition, the newest two model years of vehicles, which make up roughly 15 percent of the vehicles in the St. Louis area, are exempt from the emissions testing program because these new vehicles are most likely to pass an emissions test.

- The Gateway Clean Air Program spent $2.6 million to publicize the program and educate vehicle owners. The spending covers the cost of television, radio, and print ads, printed materials, a program Web site, toll-free information hotlines and free repair technician training.

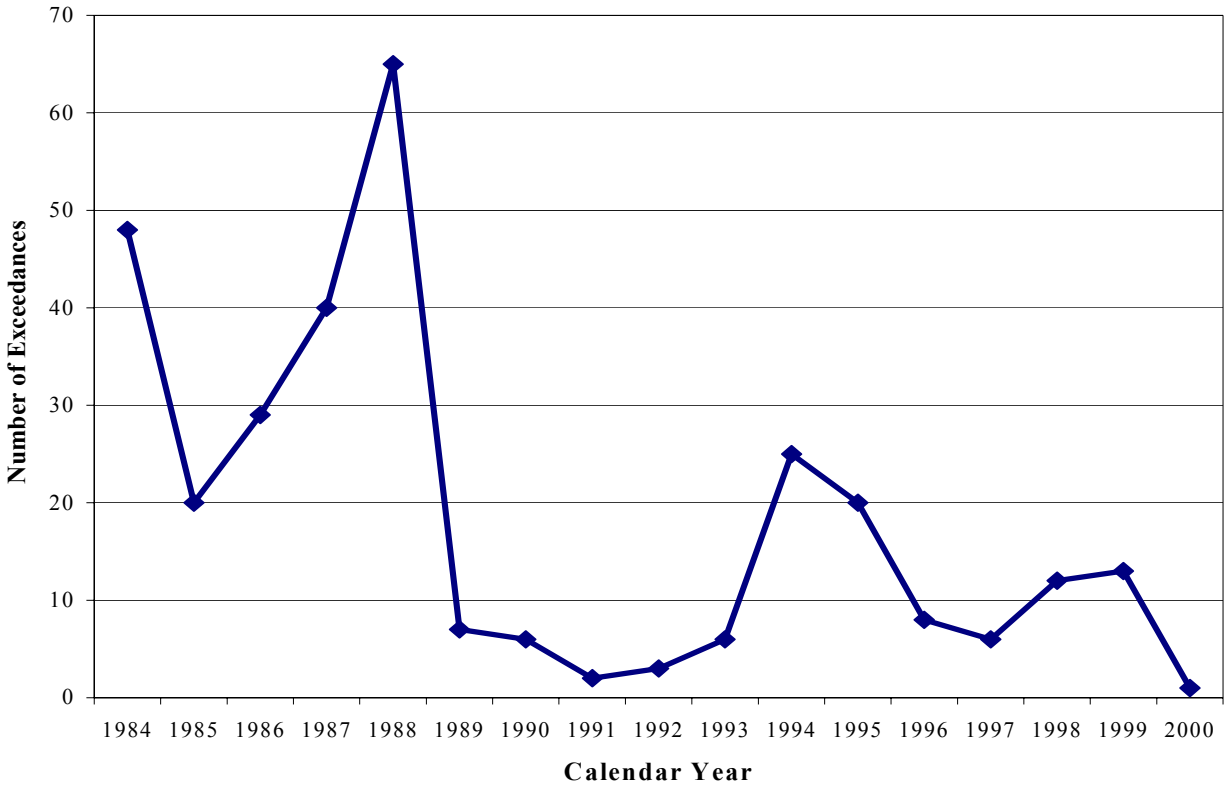
- The Gateway Clean Air Program contributed to the St. Louis economy by creating 275 jobs, partnering with local public relations and construction companies, mentoring a St. Louis-based remote sensing company, spending $2.9 million with minority-owned or women-owned companies and generating nearly $4 million in revenue for the local vehicle parts and repair industries.

## II. Introduction

Ground-level ozone is formed when sunlight and heat cause hydrocarbons and nitrogen oxides to react. A variety of sources emit these pollutants, including gasoline-powered engines. Due to the various air pollution control measures, air quality in St. Louis has improved significantly. Two mobile source controls, Stage II Gasoline Vapor Recovery, implemented in 1989, and reformulated gasoline, implemented in 1999, as well as numerous industrial controls, affecting such industries as dry cleaners, bakeries, and printing and painting operations, have already been implemented. However, the area still does not attain the health-based ozone standard. The poor air quality in St. Louis affects the health and lifestyles of area residents. Concentrations of ozone can cause shortness of breath, coughing, wheezing, headaches, nausea, and eye and throat irritation. The health effects are worse for children, the elderly and those with pre-existing respiratory problems, such as asthma.

The Gateway Clean Air Program was designed to help the St. Louis area achieve the air quality improvements necessary to attain the health-based standard for ozone. The federal Clean Air Act imposes health-based standards for ground-level ozone as well as several other air pollutants. Areas that exceed the health-based standards are known as nonattainment areas. Depending on the amount of ozone that exceeds the standard, areas are classified as *marginal, moderate, serious, severe or extreme*. The St. Louis area is classified as a moderate nonattainment area.

**St. Louis Nonattainment Area 1-Hour Ozone Exceedances from 1984-2000**



## III. Historical Background

St. Louis area air quality does not meet federal ozone standards. Therefore, the St. Louis area is considered to be in nonattainment with federal standards for ozone. The state was required by the federal Clean Air Act to prepare a state implementation plan to reverse this trend and to attain the federal ozone standard. The federally approved state implementation plan included a centralized, enhanced vehicle emissions inspection and maintenance (I/M) program. An enhanced I/M program was selected as one of the major control strategies in the plan because air quality modeling showed that including such a program greatly reduces ozone concentrations.

Implementing the enhanced I/M program, called the Gateway Clean Air Program, has proven to be challenging.

- In 1994, the Missouri General Assembly enacted legislation authorizing an enhanced I/M program in the St. Louis area.

- In 1995, program appropriations were removed from the Department of Natural Resources budget.

- In 1996, the Missouri General Assembly reinstated appropriations. An I/M program advisory committee consisting of legislators, community leaders and other stakeholders was formed. As a result, the committee recommended rule revisions to improve the design of the I/M program.

- On Feb. 27, 1997, rule revisions were proposed for public comment. On Mar. 27, 1997, the Missouri Air Conservation Commission adopted amended rules and a revised I/M state implementation plan (SIP). On May 18, 2000, the rule and SIP revisions were approved and adopted by the United States Environmental Protection Agency (EPA).

- On Aug. 14, 1997, a lawsuit was filed challenging the constitutionality of the enhanced I/M statutes. The lawsuit requested an injunction to cease implementation. On May 22, 1998, the court denied the request for an injunction and found that the enhanced I/M statutes were constitutional.

- Several legislative bills were introduced by the Missouri General Assembly during the 1998, 1999 and 2000 legislative sessions proposing amendments to the enhanced I/M statutes. Amendments that passed include:

    - The authorization for reformulated gasoline in the St. Louis area;
    - The authorization for Franklin County residents to have their vehicles emissions tested in the enhanced I/M program area;
    - A reduction in the number of days that motorists have to return a newly purchased used motor vehicle that fails its emissions inspection to the dealer who sold the vehicle without a passing emissions inspection;
    - The clarification that only the labor costs of recognized repair technicians can count toward a vehicle waiver; and

- The removal of the $5 enhanced test fee reduction for motorists who wait more than 15 minutes.

- The state released a request for proposals seeking bids for construction and operation of 30 enhanced I/M stations in October 1997. No bids were received. Potential bidders commented that the requirement for at least 30 stations was not financially feasible. In October 1998 the state released a second request for proposals for all aspects of operating the program. This request did not establish a minimum number of stations, except to require that the proposed network of stations meet the statutory requirement that at least 80 percent of the affected population be within five miles of an emissions testing station.

- The state evaluated the submitted bids to determine which bid offered the best program. Submitted bids were evaluated according to five weighted criteria:

  - Facilities (number and design of stations) - 25 percent;
  - Method of Performance - 25 percent;
  - Experience, Reliability and Expertise of Personnel - 25 percent;
  - Partnering and Mentoring - 15 percent; and
  - Cost (per emissions test - limited by state statute to no more than $24 per enhanced test and $10.50 per basic test) - 10 percent.

- A contract to implement the enhanced I/M program was awarded to ESP Missouri on Feb. 24, 1999, and the I/M program's mandatory testing began on April 5, 2000, in St. Louis, St. Charles, Jefferson and Franklin counties and St. Louis City. So that even model year vehicles with January, February, March and April license plates could be registered on time, owners of these vehicles were given temporary emissions test extensions until later in the year. These vehicles were then tested in May through December 2000.

## *Why Was Enhanced I/M Implemented?*

The previous basic I/M program was conducted until the end of 1999 at 916 facilities in the St. Louis area. The BAR90 test was done at the same time as the statewide safety inspection. However, because safety and emissions tests are now required once every two years, the department believes it has the best of both worlds – a high-tech, consistent emissions test that only has to be done every other year. Specifically, the Gateway Clean Air Program has been implemented for two reasons.

First, in 1993, the EPA audited the St. Louis area basic I/M program. The 1993 audit report stated that 84 percent of vehicle emissions inspections had been done improperly. This finding included everything from minor technical errors to outright fraud. Improper testing can lead to inaccurate test results and ineffective vehicle repairs.

By comparison, the Gateway Clean Air Program provides few opportunities for testing fraud, as technicians cannot influence the outcome of the test. The Gateway Clean Air Program contractor faces onerous liquidated damages if any employee commits fraud. State auditors conduct overt and covert investigations to assure honest inspections. Furthermore, because the

centralized testing stations do not perform repairs, there is no financial incentive for ESP Missouri's testing staff to fail a vehicle.

Second, in the mid-1980s, most manufacturers installed feedback computer-controlled fuel injection systems in their vehicles. While carbureted engines, the fuel-injection engine's predecessor, could adequately be assessed at idle speed using BAR90 equipment, fuel-injected engines are best tested under a variety of conditions including idling, accelerating, cruising and decelerating.

For this reason, the Gateway Clean Air Program uses IM240 equipment that is more accurate and sophisticated than the BAR90 equipment. The IM240 test method is a shortened version of the federal test procedure used to certify new vehicles. This sophisticated test equipment more accurately identifies vehicles that need emissions repairs. Because these vehicles are accurately tested and identified, they can be more effectively repaired.

It is important to note that the EPA did not require the state to implement this enhanced I/M program. The State of Missouri, with the help of the St. Louis community, chose to implement the Gateway Clean Air Program because it is the most cost-effective option for meeting St. Louis' air quality goals. The Gateway Clean Air Program is the largest single control strategy of the overall plan to improve local air quality. It accounts for more than 30 percent of the predicted emissions reductions.

Other mobile source controls, such as gasoline refueling vapor recovery systems and reformulated gasoline, account for another 30 percent of the hydrocarbon emissions reductions. Industrial controls account for the remaining 40 percent. If Missouri had elected not to adopt the enhanced I/M program, St. Louis industry would most likely have been faced with more controls on current sources and new, smaller sources. The cost of such additional industrial controls on St. Louis businesses could have been passed on to consumers via higher prices for goods and services and could have discouraged new businesses from locating in the St. Louis area.

It is also important to note that the Metro-East St. Louis portion of the State of Illinois must meet the same air quality goals as the St. Louis portion of Missouri. Metro-East St. Louis residents have been taking their vehicles to centralized basic I/M test stations since the early 1980s. In February 1999, Illinois required Metro-East St. Louis vehicles to be tested with the same IM240 test equipment that the Gateway Clean Air Program is now using.

### *Advisers and Partners*

The Missouri Department of Natural Resources was and continues to be concerned about the controversy that I/M programs throughout the nation have generated. The department took proactive measures to meet the challenges of beginning the enhanced I/M program and is continuously seeking suggestions from the community, elected officials and other interested groups to improve the program.

Toward that end, the department convened an Inspection/Maintenance Program Advisory Committee in 1996. The advisory committee included representatives from auto sales, auto

repair, auto technician trainers, the local business community, local government, state legislators, the EPA, environmental groups and agencies in other states that have implemented similar I/M programs. There were 33 members of the advisory committee, which held seven meetings.

Using the framework established by the state law that authorized the enhanced I/M program in St. Louis (codified in Section 643.300-350 RSMo) and the existing state law for the basic I/M program (codified in Section 307.366 RSMo), advisory committee members made various recommendations about rule changes and contract language for companies that build and run emissions testing stations.

Because the collaboration of the advisory committee members was successful in getting the Gateway Clean Air Program off the ground, the department formed another collaborative committee in 1999 to address the repair industry's participation in the Gateway Clean Air Program. The Repair Technician Advisory Workgroup is composed of repair technicians associations and unions, dealer groups, government fleet managers and repair technician schools/trainers. During this reporting period, the workgroup met at least once per quarter depending on impending issues.

Under the advice of this workgroup, the department was able to resolve several issues that affected the repair technicians in the St. Louis area. With the assistance of several of the members, the department was able to set up training programs for successfully repairing vehicles that fail the emissions test. Also, the department was able to set up an out-of-cycle test for technician certification by the National Institute for Automotive Service Excellence (ASE). It is rare for the institute to conduct tests out of its normal twice-per-year May and November test cycles. Specific ASE certifications are required for Missouri Recognized Repair Technicians under the Gateway Clean Air Program rules.

## IV. Continuous Improvement

The program experienced some operational difficulties in its first few months. This is not unexpected for a brand new program affecting more than one million vehicles in a multiple-county region. The department and the contractor, ESP Missouri, work diligently and continually to evaluate the program and make changes when necessary to improve the operations and increase customer convenience. Long customer wait times, busy phone lines and confusion about the testing were problematic especially in late May and early June. However, changes implemented by the department and the contractor have drastically improved the program.

In May 2000, motorists experienced long wait times. During the last two days of May and the first few days of June, wait times averaged over an hour at some test stations, with some wait times as long as three hours. There were several reasons for these long wait times: 1) Station lane staff were well-trained but still new. So lane throughput, or the number of vehicles tested per lane per hour, was lower than typical of more mature programs in other states. 2) During the beginning of the program's operation, there were a high number of lane inspector resignations. 3) June is a normally busy month because many registrations are due for renewal. A larger percentage of vehicles are purchased in the warmer months, and registration is based on the month a vehicle is purchased. 4) Vehicles with January to April plates were given extensions until later in the year. Because of these extensions, the program was testing 12 months worth of vehicles in nine calendar months. 5) And finally, the key station volume-reducing mechanism, RapidScreen, did not work as planned. RapidScreen was not understood or recognized. During these months, the public underused RapidScreen.


Entrance signs inform motorists of the amount of time they can expect to wait for a test. While there were long waits for emissions tests in May and June 2000, the average wait time for the first year was 14 minutes.

Prior to June 2000, a majority of vehicle owners ignored the RapidScreen mailers that notified them that their cars did not need a station-based test. When queue lines started to reach unacceptable levels in late May, the department and contractor worked quickly to find solutions. Advertisements were run on television and in print to more extensively describe the advantages of RapidScreen. Also, RapidScreen mailers were modified to make them recognizable as an official state document. After improvements were made to the mailer and the phone payment system, the RapidScreen participation rate jumped from 40 percent to more than 70 percent. The goal is an 85 percent return on notices mailed out.

Another successful method to reduce the number of vehicles in line in the queue lanes was an innovation the contractor called SuperGreeters. SuperGreeters were installed in June 2000. A SuperGreeter is a staff person placed in the driveway in front of the time ticket dispenser. SuperGreeters are equipped with a laptop computer. As vehicles pulled up, the SuperGreeter would enter the vehicle license plate number into the laptop. The computer would show whether the vehicle had qualified for RapidScreen. If qualified, the SuperGreeter would inform the driver that they did not need to enter the queue but could park in the station parking lot, enter the station office and process the RapidScreen payment to receive a test certificate. This prevented vehicles from unnecessarily entering already full queue lines.

Starting in June 2000 and continuing through the rest of the summer, staff were assigned from several other programs in the Department of Natural Resources to work at the stations. Staff answered questions, assured the quality of the procedures and helped manage queue flow. At the end of months when queue lines were higher than average, staff supplied ice and soft drinks to waiting motorists.

In addition to busy stations, phone information lines were also jammed. The department had complaints about busy signals, long waits on hold and rude hotline operators. More phone lines have been installed, and more hotline operators were hired to staff the lines. The department is now confident that the 35 phone lines available are sufficient. In addition, the department provides oversight of the operators to ensure quality customer service.

In July 2000, the department hired an ombudsman to ensure that customer questions and concerns are relayed to the department and addressed in a timely manner. The ombudsman, who works out of the department's St. Louis Urban Outreach Office, enables the department to be responsive to the citizens of St. Louis.

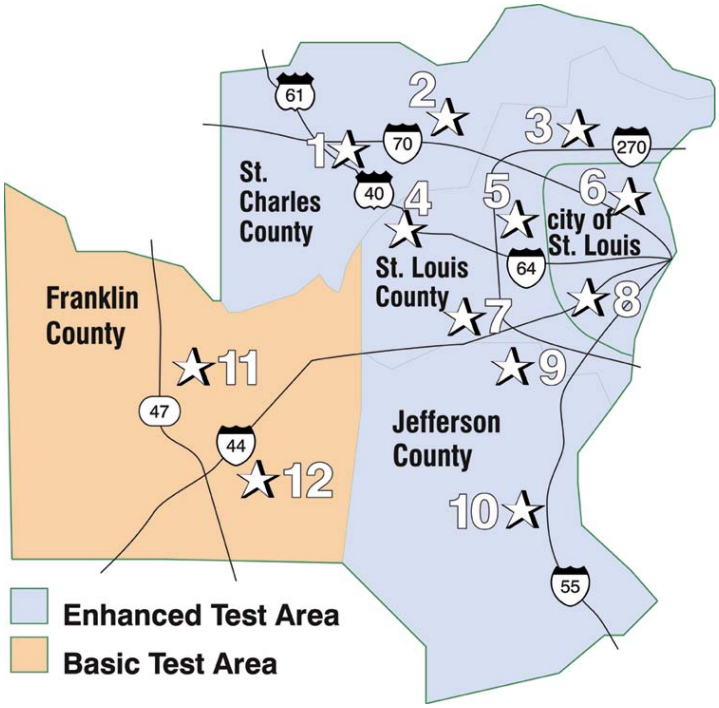
### *Additional Mobile Van and Test Station*

Two of the primary selection criteria used to choose a contractor were the number of emissions testing stations and other motorist convenience factors. ESP Missouri was chosen because the company proposed an innovative plan to serve Franklin County with a mobile van. Using this van, ESP Missouri planned to bring idle testing services to less populated sections of the county.

Prior to the start of emissions testing, the department received comments from residents of the City of Washington, the largest community in Franklin County. The Union station is approximately five miles south of the city limits of Washington. Washington residents and their elected representatives desired service within the city limits. The department responded quickly to negotiate with the contractor and Washington officials and administrators.

As a result of these negotiations, ESP Missouri added another mobile van for Franklin County for the program start in April 2000. The two vans now operate on weekly rotating schedules in the communities of Gerald, Gray Summit, New Haven, Robertsville, Sullivan and Washington.

In addition to the two basic testing stations and two mobile vans in Franklin County, the Gateway Clean Air Program is designed with a network of 10 enhanced emissions testing stations, conducting the more stringent IM240 test, in St. Louis City and St. Louis, St. Charles and Jefferson counties. For customer convenience, this enhanced network is required by statute to locate testing stations so that 80 percent of the affected public resides within five miles of a testing station.




Eighty percent of the testing public reside within five miles of the 12 testing locations. However, south St. Louis County would benefit from an additional station.

The existing network of enhanced test stations meets the statutory requirement. The department is pleased with the existing network because it provides good coverage for the metro area. However, citizens, auto dealers and most of the south St. Louis County legislators voiced desire for an additional station to serve the South County area. This desire provided the impetus for securing a location for an additional station. Such a testing station would enhance customer convenience through reduced drive and wait times not only for residents of south St. Louis County and northern Jefferson County but also for motorists who commute to or through this area.

Consequently, the department applied for federal reimbursement funds under the Congestion Mitigation and Air Quality (CMAQ) Improvement Program for a project to construct and operate an additional emissions testing station in south St. Louis County as part of the Gateway Clean Air Program. CMAQ grants are administered by Metropolitan Planning Organizations, which in St. Louis is the East-West Gateway Coordinating Council. On June 28, 2000, the East-West Gateway Coordinating Council approved a $4.2 million grant to build and help operate an additional emissions testing station in South County. The Department of Natural Resources and Missouri's Office of Administration have finalized a contract amendment with ESP Missouri to build a new vehicle emissions testing station in the south St. Louis County area.

## *Damage Claims*

The department will not be satisfied until there are no claims of damage. However, it is important to understand that the damage claim rates of the Gateway Clean Air Program are not unusual when compared with damage claim rates of other I/M programs in other states. As of September 2001, more than one million emissions tests have been conducted, and damage claims were filed for about 0.1 percent of the vehicles tested. In other words, 99.9 percent of the emissions tests were performed without claims of vehicle damage.

The IM240 equipment and test procedures used by the Gateway Clean Air Program are not harmful to vehicles. The maximum speed that is simulated is 58 mph, and the maximum acceleration required is 3.3 mph per second. If the test is conducted properly and the vehicle has been properly maintained, then no damage will occur to the vehicle during the emissions testing. To ensure that the test is conducted properly, lane inspectors must undergo 60 hours of training, followed by three days of supervised on-the-job training. The department also audits the stations to make sure that the test procedures are being followed. For more information about these audits, please see Volume II of this report. In addition, because each test lane is videotaped and stored for 90 days, videotape audits are performed.

Most 1981 and newer model year vehicles receive an IM240 emissions test. This test simulates real world driving conditions to more accurately identify vehicles with high emissions.

This does not mean that vehicle damage hasn't occurred; operational errors have happened. But it is important to put this issue in perspective. As in any business that handles a high volume of vehicles, such as a repair facility or a car wash, damage does occasionally occur to vehicles receiving an emissions test. Because the department is concerned about each and every vehicle damage claim, all reported claims are thoroughly investigated.

The Gateway Clean Air Program has a well-established procedure for resolving reported claims. The department and the contractor meet weekly to discuss all claims received. The damage claim team reviews the claims filed the previous week and all claim actions taken and pending. Since the program's start, the damage claim team has refined the claims process in several ways. A brochure was created for motorists to clearly describe the process and their rights. The form to file a claim was simplified, and the department made an agreement with an independent organization to conduct secondary technical evaluations for difficult cases at the department's discretion.

Claims can range from minor cosmetic damages, such as paint scratches, to claims of major damage to engines or transmissions. The contractor pays for any damages found to be their responsibility. Minor cosmetic damage claims are paid immediately at the station. About 75 percent of the claims that are filed have been either withdrawn by the motorist or denied because of a pre-existing vehicle condition. Twenty-five percent of claims have been substantiated and paid.

## V. Program Effectiveness

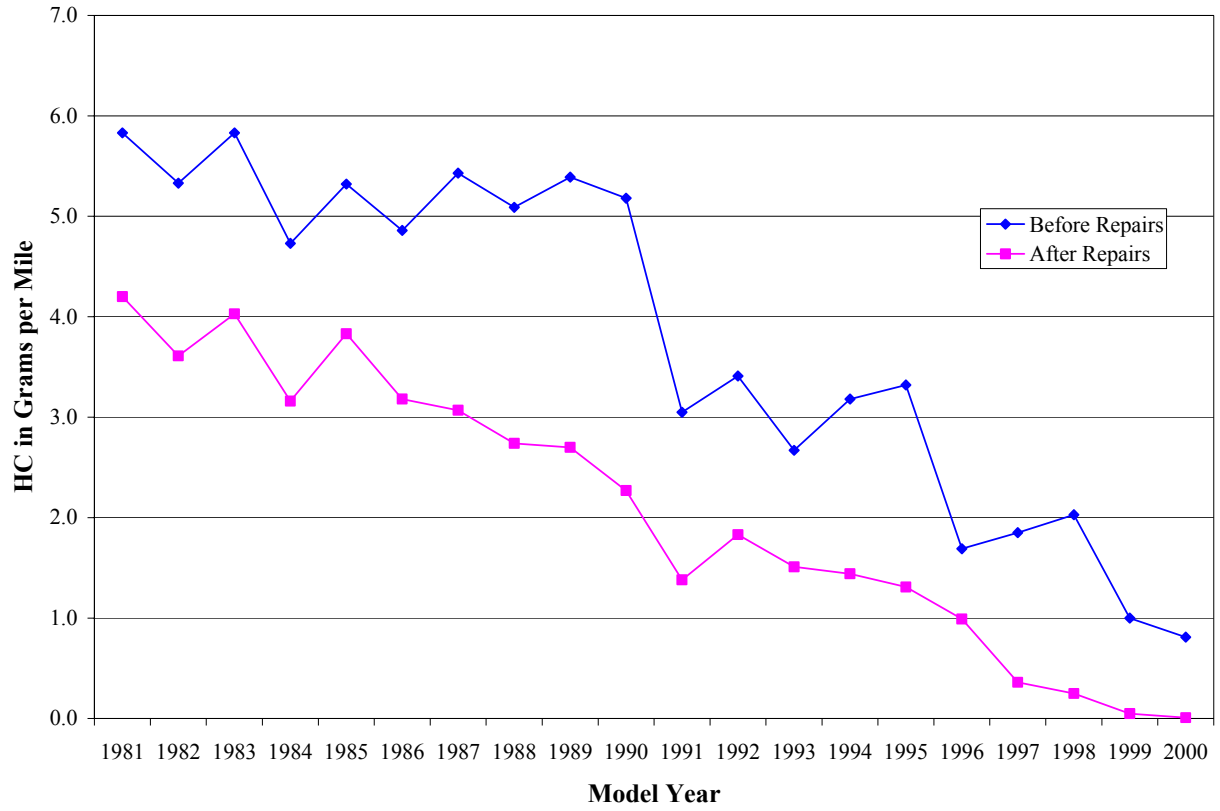
From Jan. 1 to Dec. 31, 2000:

- 567,287 vehicles were emissions tested at a station or by RapidScreen methods.
- 452,581 vehicles were tested at a station.
- 437,468 vehicles (1981-2000 model years) received an IM240 test. The average IM240 failure rate (including retests) was 13.3 percent.
- 15,113 vehicles (1971-1980 model years) received a BAR90 test. The average BAR90 failure rate (including retests) was 17.3 percent.
- 107,330 vehicles received an off-cycle test, which accounts for 18.5 percent of the annual test volume. An off-cycle test is a test performed on an odd model year vehicle during an even calendar year. Most off-cycle tests are performed on vehicles that are being sold to a new owner.
- Including retests, 40,610 vehicles failed a station-based test.
- The average failure rate for light duty passenger vehicles and light duty passenger trucks under 6,000 pounds Gross Vehicle Weight Rating (GVWR) was 9.1 percent. The average failure rate for light duty passenger trucks between 6,000 and 8,500 pounds GVWR was 19.0 percent.
- 8,000 vehicles failed the gas cap pressure test. 7,017 of those 8,000 vehicles failed only the gas cap portion of the test. The average gas cap failure rate was 1.92 percent.
- While vehicles cannot fail the emissions test for missing emissions control components, they cannot qualify for a waiver unless the missing components are replaced. Among the vehicles that failed an emissions test, 4,076, or 12.1 percent, were missing one or more emissions control components. The most common missing components were the air pump (2,173), catalytic converter (1,236), positive crankcase ventilation valve (960) and exhaust gas recirculation valve (792).
- The four busiest stations in the enhanced station network were: South City – South Kingshighway (7,474 vehicles/month), North Jefferson County – Arnold (6,682 vehicles/month), Mid-County – Olivette (6,228 vehicles/month), and North County – Florissant (6,154 vehicles/month).
- For more specifics regarding the station-based testing, please see Volume II of this report. For more specifics regarding the RapidScreen testing, please see Volume III of this report.

### *Hydrocarbon Reductions*

Hydrocarbon (HC) emissions from vehicles are precursors of ground-level ozone and are the primary target of the Gateway Clean Air Program. Vehicles that failed were either repaired

**HC Emissions Before and After Repairs**

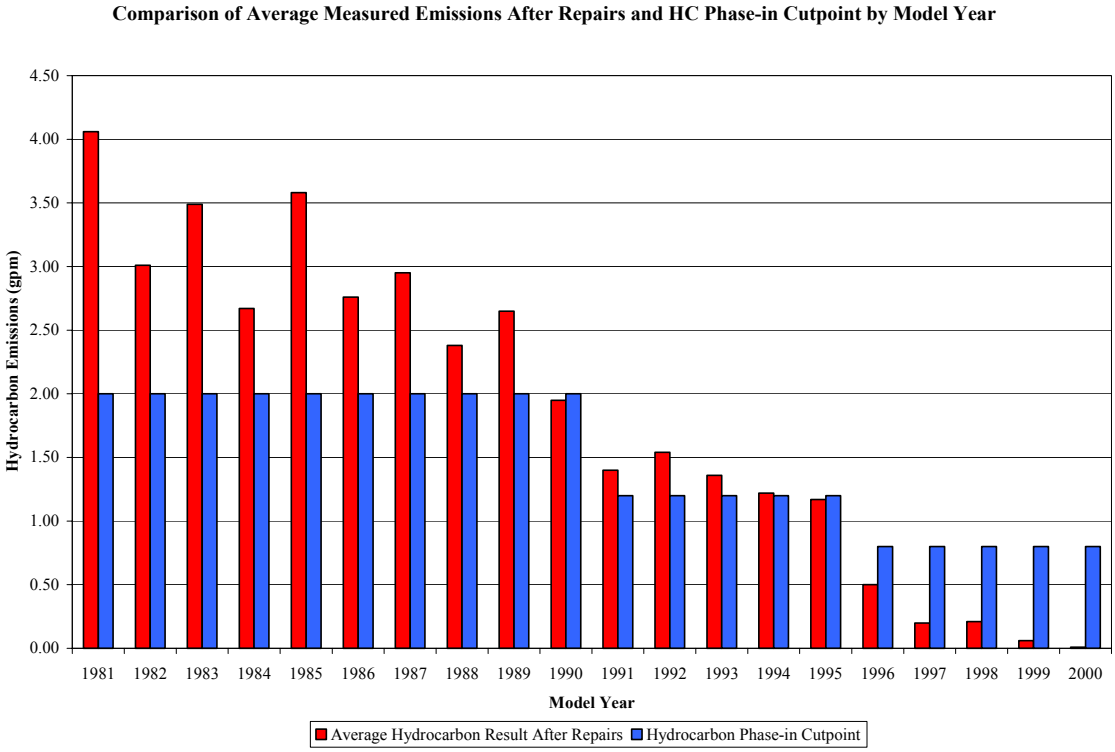



or were relocated from the St. Louis area by the owner. Repaired vehicles either passed the test or were waived. In 2000, the average improvement in HC tailpipe emissions was 1.86 grams per mile. Furthermore, the Gateway Clean Air Program tests for leaking gas caps. Gas caps that can't hold a pressure allow evaporated gasoline, which is a type of HC, to escape from inside a vehicle's gas tank. Because 8,000 gas caps were replaced, the I/M program is reducing both tailpipe and evaporative HC emissions.

The air quality impact of the Gateway Clean Air Program is more thoroughly evaluated in a separate report, entitled "2002 Program Evaluation Report", submitted to the Environmental Protection Agency in January 2003. This report is available on the internet at: www.dnr.state.mo.us/alpd/apcp/gcap/newrelease.htm.

## *Ineffective Repairs*

Although most vehicles are showing a reduction in tailpipe emissions, some are not being fully repaired. Data on waivers show that 20.7 percent of the vehicles that failed the emissions test in 2000 have been granted waivers. A vehicle waived still pollutes more than the standards (see the graph on the next page). In other words, because some vehicles are not being fully repaired, the Gateway Clean Air Program is not obtaining the maximum air quality benefit.




## *Cost of Reductions*

Because the Gateway Clean Air Program is a fee-based program, the revenue generated by the program is used to pay for the cost of the program. No state revenue is spent on this program. The revenue collected is used to pay for the following: the land where the test stations are located, the construction of the stations, the purchase and installation of the emissions test equipment, and the ongoing cost to pay for the operation of the test stations, which includes the payroll of the program management and station staff, and the utilities consumed by the stations. All of these costs are borne by the department's contractor, ESP Missouri.

For the annual reporting period, the Gateway Clean Air Program collected the following revenue:

| *Test Type* | *Test Fee* | *Quantity of Test Type* | *Revenue Collected* |
|---|---|---|---|
| *Enhanced Area Test* | $24.00 | 362,732 | $8,705,568 |
| *Enhanced Area Test - 30 min. wait time discount* | $14.00 | 35,732 | $ 500,248 |
| *Enhanced Area Test - 60 min. wait time discount* | $ 4.00 | 7,754 | $ 31,016 |
| *RapidScreen Test* | $24.00 | 135,427 | $3,250,248 |
| *Basic Area Test* | $10.50 | 43,233 | $ 453,947 |
| *Totals* | | 548,878 | $12,941,027 |

Combining the amount of test revenues collected with the cost of vehicle repairs (described in section VIII), $3,996,089, the total cost to the public of the Gateway Clean Air Program in the first year of operation was at least $16,937,116.

## VI. RapidScreen Summary

The Missouri Department of Natural Resources listened to citizens and elected officials and included cutting-edge technology in the Gateway Clean Air Program. RapidScreen is a new technology that is designed to maximize customer convenience while still achieving the necessary air quality benefits of the program.

The RapidScreen program uses vans carrying on-road remote sensing equipment for the purpose of identifying exceptionally clean-running vehicles. ESP Missouri sends owners of these clean-running vehicles notices that allow them to receive their certificates and stickers by mail without making a trip to a test station. This increases customer convenience in two ways: 1) RapidScreened vehicles can forego a trip to an emissions test station, and 2) The motorist wait times at the test stations are decreased because fewer vehicles are required to go to an emissions test station.

This part of the program was developed based upon guidance from the U.S. Environmental Protection Agency. These mobile units are set up at highway entrance ramps for two reasons: 1) these locations offer a large daily volume of vehicles, and 2) the vehicles need to pass the vans within certain speeds and acceleration ranges to ensure test accuracy.

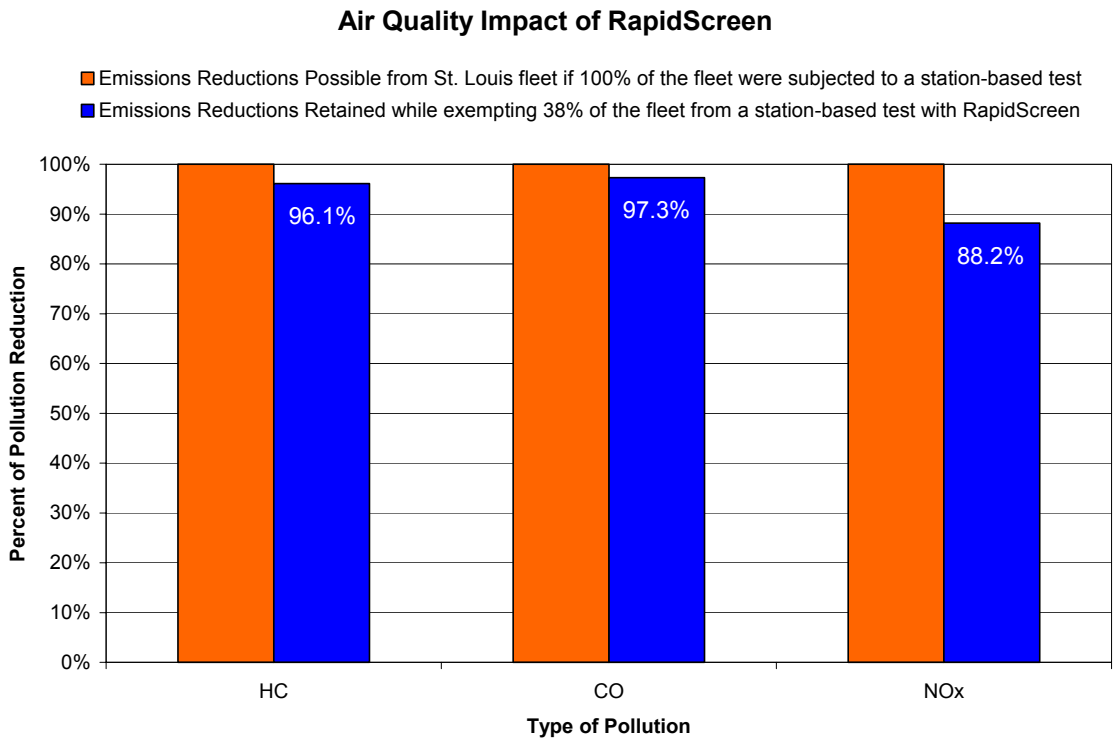
RapidScreen vans use cutting-edge technology to screen out the cars with the cleanest emissions from the emissions test stations.

RapidScreen vans are operated on a rotating basis throughout the St. Louis area to produce a randomly identified population of vehicles that qualify to receive a RapidScreen notice. If motorists receive a notice and submit the fee for a RapidScreen test, they avoid having to bring their vehicle in for a station-based test. There are occasions when the van locations must be changed on short notice, or the vans cannot be used at all. This may be due to inclement weather, road construction or other unforeseen circumstances. The van locations are routinely posted on the Gateway Clean Air Program Web site, www.gatewaycleanair.com. Locations can also be obtained by calling the toll-free information number at 1-888-748-1247.

State statute exempts vehicles of the two newest model years, which make up 11 to 12 percent of the St. Louis fleet. Vehicles older than 1971 are exempt as well. As a condition of the contract, the emissions testing contractor, ESP Missouri, must RapidScreen an additional 28 percent of the

cleanest vehicles. As a result, 40 percent of the total fleet are not emissions tested at a test station. The department chose to exempt 40 percent because this amount provides the best balance between customer convenience and meeting air quality goals.

RapidScreen is a real test of emissions and is accounted for in department air quality modeling for emissions reduction credits related to the federal Clean Air Act. Actually exempting additional model years of vehicles, instead of RapidScreening them, would decrease emissions reductions and jeopardize the state's ability to meet its air quality goals.




For more information regarding the specifics of the RapidScreen element of the Gateway Clean Air Program, please see Volume III. Included in that report are details about the Low Emitter Indexing RapidScreen method, which was discontinued in November 2000 due to public concern about the validity of this test method.

## VII. Public Information Campaign

ESP Missouri is required to conduct a Gateway Clean Air Program public information and education campaign on behalf of the department. The contractor must spend at least $750,000 per year from fee revenues to distribute information to the public.

The contractor was required to pay for informational materials and distributions starting at least three months before the first vehicles were tested. To better inform the public of the new testing procedure, a public information campaign began in October 1999, six months before April 2000, when the first vehicles were tested at the enhanced stations. Early advertising was designed to increase program awareness. The most recent information has focused on providing specific program details.

As with any new program of this magnitude, the program has worked to get the information as quickly and efficiently to as many people as possible. Public information efforts have included a variety of elements and materials to inform and educate St. Louis area motorists. These efforts include radio, television, print and billboard advertising; media appearances on television and radio to explain the program; emissions test notification mailings; printing and distribution of fact sheets, brochures and other literature; maintaining a web site (www.gatewaycleanair.com) and a toll-free information line (1-888-748-1247); giving public presentations to community groups; and staffing information booths at public events such as the Missouri Black Expo and Fair St. Louis. The contractor has also spent money to publish quarterly newsletters and conduct free training sessions and open houses for the auto repair industry. Through the end of 2000, ESP Missouri spent $2,557,288 on these public information efforts.

Additionally, the EPA awarded the department funding for two grant projects. Each project was managed by the American Lung Association of Eastern Missouri (ALAEM). ALAEM, in partnership with the department, completed the Air Repair Communications Project. This project was a large-scale community awareness initiative that focused on the benefits of an enhanced inspection and maintenance program in the St. Louis area. The grant was funded in 1997. The EPA also funded the Neighbors for Clean Air grant project in 2000. The goal of this project is to increase public awareness about the impact of motor vehicle emissions on health. The project consists of community-based educational meetings, information booths and the production of an explanatory brochure.

Lastly, the department is a partner in the St. Louis Regional Clean Air Partnership, a public-private partnership formed to increase awareness of regional air quality issues and to encourage activities to reduce air pollution emissions. Information and links related to clean air and the impact of vehicle emissions on air quality are provided on the partnership Web site, www.cleanair-stlouis.com.

## VIII. Economic Benefits

Besides improving air quality and improving the performance and fuel economy of vehicles, the Gateway Clean Air Program has tangible benefits for the St. Louis area economy. Local jobs have been created, and local firms have been subcontracted, including minority- and women-owned businesses.

ESP Missouri has created numerous positions in the St. Louis area. They maintain a full staff level of about 275. Ninety-eight percent of all staff are St. Louis area local hires. Most of ESP Missouri's positions are in the stations, such as lane inspectors and test station managers. There are about 25 positions at ESP Missouri's central office in St. Louis County including program, operational and financial managers, clerical staff, and toll-free information line operators.

### *Minority Participation*

More than 48 percent of ESP Missouri's staff are minorities. From the start of the partnership with the state, ESP Missouri has committed to maintain at least a 40 percent minority workforce.

As a part of the contractual requirements, ESP Missouri has developed a comprehensive plan to use minority business enterprises (MBE) and women-owned business enterprises (WBE) as subcontractors. The objective of this requirement was to effectively use enterprises that directly recruit minority employees. The contractual goal is for at least 5 percent of all ESP Missouri spending to be with MBE/WBE businesses in Missouri. (The state's MBE/WBE goals were changed to ten percent MBE and five percent WBE subcontracting after the Gateway Clean Air Program Request for Proposals was released.) To date, ESP Missouri has achieved this objective. MBE/WBE spending from March 1999 through December 1999 during the construction and preliminary public information phases totaled $1,738,125. MBE/WBE spending from January 2000 through December 2000 totaled $2,907,315.

### *Local Partnerships*

After the contract was signed, ESP Missouri assembled a partnership of St. Louis-area companies and personnel with outstanding credentials covering a wide range of expertise and services.

- The Gray Design Group, a WBE firm, assisted ESP Missouri in preparing architectural plans for the test station buildings and sites.
- The Paric Corporation constructed most of the testing facilities in the network. Paric has an impressive record of successful construction projects and an outstanding record of using minority subcontractors.
- ESP Missouri subcontracted with Kwame Construction, a MBE firm, for the remaining portion of the testing facilities in the network.
- The Vandiver Group, a WBE firm, is an experienced public relations firm. The company is versed in St. Louis issues and has managed Gateway Clean Air Program communications planning and implementation.

### *Mentoring*

The department included an innovative contractual requirement that requires the contractor to mentor business in the St. Louis area in the operation of this program. ESP Missouri has already

begun the mentoring process with Remote Sensing≡Air, a St. Louis-based environmental services company. Remote Sensing≡Air is responsible for gathering the RapidScreen data and ensuring its quality so that the RapidScreen element of the Gateway Clean Air Program runs smoothly. By sharing its proprietary technology and knowledge with Remote Sensing≡Air, and by including a local company in the RapidScreen process, ESP Missouri is making a long-term investment in the success of Remote Sensing≡Air and the St. Louis economy.

### *Repair Community Benefits*

The department collects repair information from each motorist whose vehicle is repaired to keep track of the amount of money spent on repairs and provide information to the public about successful repairs. This data collected does not include the money spent prior to a vehicle's emissions test; the money spent to bring a vehicle into compliance with the state safety inspection, which includes the visual inspection for the presence of emissions control components; or the money spent on vehicle maintenance, such as oil changes or manufacturer's mileage-based recommended parts inspections or replacement.

During the reporting period, the department's data indicates that $2,398,834 was spent on vehicle emissions parts, and $1,597,255 was spent to cover the cost of repair technician diagnosis and labor. Therefore, the Gateway Clean Air Program has generated at least $3,996,089 in revenue for the local vehicle parts and vehicle repair industries.

## IX. Conclusion

The first operating year of Gateway Clean Air Program was one marked by improvements. The Department of Natural Resources and our contractor, ESP Missouri, have made incredible strides to make the Gateway Clean Air Program as convenient to motorists as possible. To accommodate the needs of motorists and their vehicles, the program has been flexible and will remain responsive. The Department of Natural Resources values this program as a vital part of the effort to clean up air pollution and improve the health of citizens who live in or near St. Louis.

The information in this report demonstrates that the Gateway Clean Air Program is complying with the EPA-approved I/M portion of the Missouri SIP. Based upon the information provided in the three volumes of this report, the Department of Natural Resources' Air Pollution Control Program recommends that the program be continued.

For copies of or more information regarding the Gateway Clean Air Program 2000 Annual Report, please write or call:

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